

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The purpose of this research is to study the properties of the cement sand brick being added with three different ratios of corn cob in terms of compressive strength, water absorption and density. There are three motives of this chapter which are to outline the research methodology of this study, clarify the calculations of the corn cob ratios, and explaining the parameter and testing conducted to achieve the objectives of this research.

This clause is an approach in order to ensure the research to achieve the objectives outlined earlier. It will also can assure the research to be conducted correctly according to the procedures of the testing. When the research being executed according to standard of procedure, the result outcome is highly believed to be correct and trusted. Therefore, by preparing research methodology in thesis, any issues or technical problems that can affect the final results of this research can be avoided in the future. The arrangement of this chapter will cover from the first step on executing the research until the final phase of the study. This will guarantee the exact way of the research to be leaded to and can be completed within the timeframe given.

3.2 CONCEPTUAL FRAMEWORK OF RESEARCH

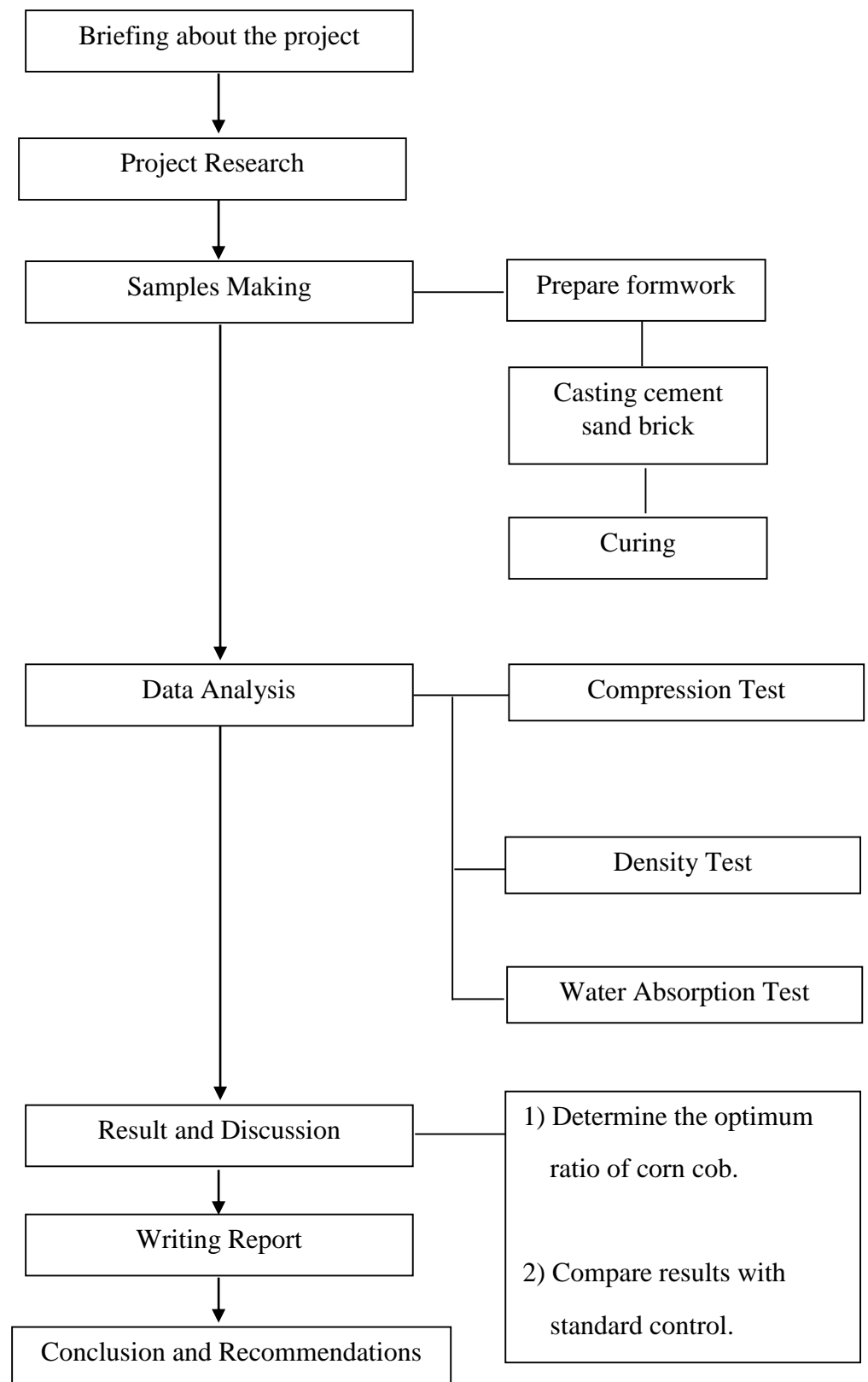


Figure 3.1: Conceptual framework of research.

3.3 BRICK DESIGN

Brick design is important since the brick is the main character in this research. The following sub-section will explain the details of the proposed cement sand brick used

3.3.1 Size of cement sand brick

Design of a cement sand brick will follow the standard nominal sizes provided by Public Work Department (PWD) in (Standard Specification for Building Works 2005).

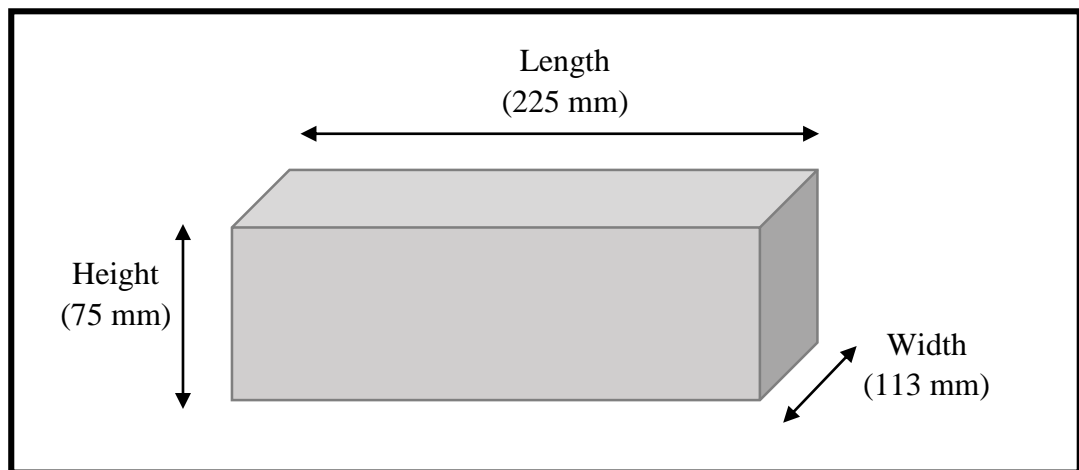


Figure 3.2: Size of a propose cement sand brick

3.3.2 Size of Formwork

In order to produce 90 samples of cement sand brick added with three ratios of corn cobs, the following size of formwork has been proposed. Formworks are made from plywood with 12 mm thickness and complying with MS 228. Each batching of cement sand bricks will use six formworks which at the end of mixing, the total of 30 samples of bricks will be obtained.